

Africa has not previously been recorded from this country and thus is a new record for India.

This genus consists of about 200 species mostly distributed in the temperate regions of the world. The identification of the species is rather difficult owing to close resemblance in vegetative characters to many of the species in this genus. Much importance, therefore, is attached to the fruiting characters such as the length of seta, nature of stomata, position of the peristome in dry condition, shape of the capsule when dry and the hairiness of calyptra.

Orthotrichum pumillum Swartz. in Month. Rev. 34: 538. 1801.

In close tufts, pale green or yellowish green. Stem 5 mm tall, stout. Leaves when dry erect and imbricate, when moist erecto-patent to spreading, 1.5-2.5 × 0.7-0.8 mm, oblong-lanceolate; apex broadly obtuse or shortly pointed; margin entire, recurved; nerve greenish, near the base thick and wide, 60-125 μ broad, gradually becoming narrow and obscure upwards, ceasing below the apex; cells rounded-hexagonal or oval, 14-17 μ , thick-walled, more or less distinct, minutely papillose, somewhat smaller near apex, towards the base pellucid, shortly

rectangular, 15-17 × 25-35 μ , a few rows towards margin quadrate. Capsule immersed to more or less emergent on a very short seta, small, oval-oblong, yellowish brown, ribs eight, strong, orange, of 3-4 rows of cells with the lateral walls strongly incrassate, when dry sulcate, narrow and contracted below the mouth; stomata in the middle of the capsule, immersed, partly covered by the overlapping superficial cells; peristome double, outer teeth in 8 pairs, reflexed when dry, pale brown, finely papillose, processes 8. Calyptra pale yellow to brownish yellow, more or less sulcate, naked or with a few erect hairs. Spores 14-20 μ , grossly papillose.

Closely related to *Orthotrichum alpestre* Hornsch., but differs in the short size of plant and smooth calyptra.

WESTERN HIMALAYAS: Kashmir, Tangmarg, 2500 m, Sept. 9. 1961, Vohra & Wadhwa 548 (CAL).

ACKNOWLEDGEMENT

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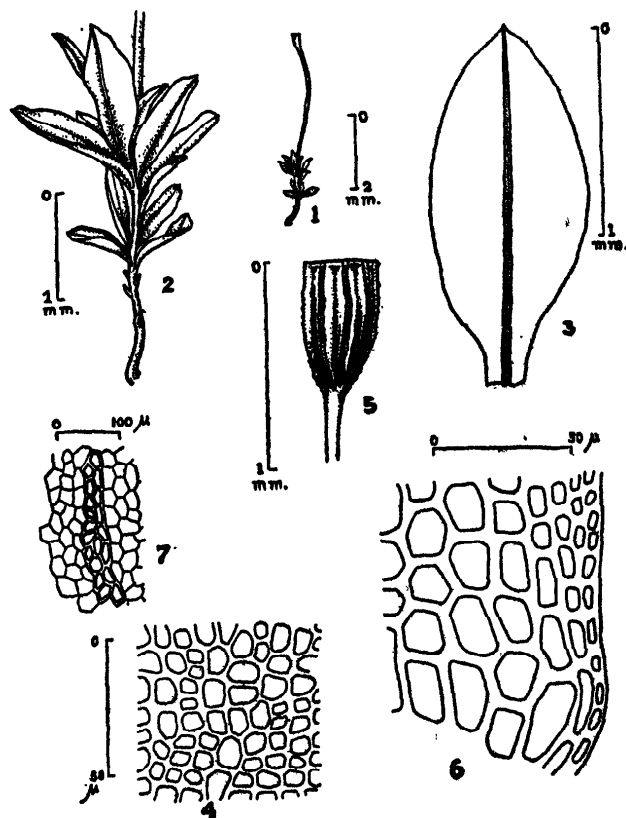
MERCEYOPSIS ANGULOSA BROTH. ET DIX.—A NEW RECORD FOR WESTERN HIMALAYAS

In the Central National Herbarium, Calcutta, recently the authors came across a specimen bearing a manuscript name *Hyophila minuta* Broth. collected by Kabir Khan from Bagheshwar, Almora Dist. (Western Himalayas). On verification it was found to be *Merceyopsis angulosa* Broth. et Dix. This species was described by Dixon (1910) from Sikkim and was not reported again from any part of the country. The present specimen is thus a new record for Western Himalayas.

It differs from the other two Western Himalayan species of *Merceyopsis*, namely *M. hymenostylioides* Broth. et Dix. and *M. robusta* Dix., by spatulate, widely obovate, apiculate leaves and 8-angled capsule.

Merceyopsis angulosa Broth. et Dix. in J. Bot. 48: 302, 1910. *Hyophila minuta* Broth. ms. in Herb. Calcutta.

In lax tufts, green or yellowish green. Stems erect, simple or once forked, 2-3 mm high. Leaves crowded towards stem apex, on drying tubular and strongly incurved, not crisped, when moist spreading, 1-2 mm long, from a very narrow base spatulate, widely obovate, apiculate; margin erect, entire; nerve brownish, thick, excurrent into an



Merceyopsis angulosa Broth. et Dix.

Figs. 1-7: 1. & 2. Habit. 3. Leaf. 4. Upper cells. 5. Capsule. 6. Basal cells. 7. Rib of the capsule.

apiculus; cells distinct, rounded, incrassate, $5-10\mu$ wide, profusely mamillöse on the ventral surface, at base wider, quadrate to sub-rectangular, brownish, $12-16\mu$ wide, a few cells towards margin small, elliptic or rectangular. Perichaetial bracts distinct, ovate-lanceolate, abruptly narrowing near apex into a short acumen. Seta 3 mm tall. Capsule minute, oval, 8-angled, each ridge bearing 2 series of incrassate cells which alternate with the lax, thin walled hexagonal cells of the exothecium.

WESTERN HIMALAYAS: Bagheshwar, Almora Dist., 2000 m., - July 27, 1900, *Kabir Khan s.n.* (CAL).

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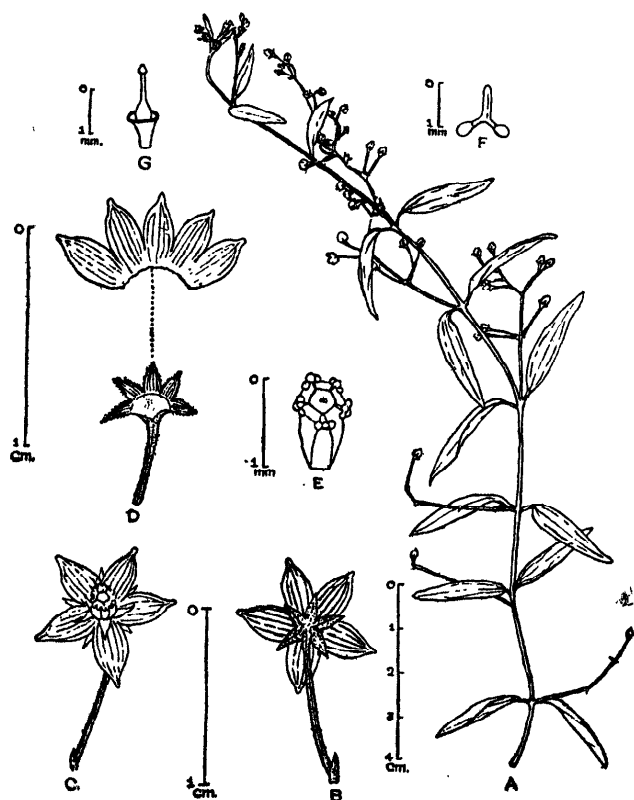
NOTES ON THE DISTRIBUTION OF *TYLOPHORA TENERRIMA* WALL. EX WIGHT (ASCLEPIADACEAE)

In connection with studies on the flora of Champaran District, North Bihar the authors collected a climber growing in greyish, sandy-loam soils of Madanpur Reserve Forests (*S. P. Banerjee & R. N. Banerjee 549*). After careful comparison with the authentic materials available in Herb. CAL and

also with the type description, this has been identified as *Tylophora tenerrima* Wall. ex Wight, *Contrib.* 50, 1834. This species can be broadly differentiated from related ones by its ligulate to linear-lanceolate, 2-5 mm broad leaves, dull-red to purple flowers and coronal scales longer than the staminal tube. It is reported only from Subtropical Himalayas, 915-2135 m, from Kumaon to Nepal and Sikkim. Among the regional Floras of India this is reported by H. Collett from Simla in his *Fl. Simlensis*: 320, 1902; and by J. F. Duthie from Dehra Dun, in his *Fl. Upper Gangetic Plains* 2: 62, 1911. C. J. Bamber in his *Plants of the Punjab*: 584, 1961, reported this from "east of the Sutlej" without quoting any authentic material. It is not recorded from any other locality. In the past this species was considered to be mainly restricted to the Subtropical Himalayas. But here it is reported from the plains of Bihar.

An examination of the herbarium specimens available in Herb. CAL revealed further distribution of the species; these specimens are cited below along with our collection.

BIHAR: Madanpur Forest, Champaran Dist., climber growing in sandy-loam soil, fls. purple, *S. P. Banerjee & R. N. Banerjee 549*. N. W. HIMALAYA: Dehra Dun, N. W. Himalaya, 16.8.1907, *Mackinnon s.n.*, Acc. No. 295379; Dehra Dun, *Falconer, s.n.*, Acc. No. 295387; Jeolikote, 1372 m, Kumaon, 4.8.1909, *N. Gill 125*; Mussoorie, 1525 m, 27.7.1898, *Mackinnon s.n.*



Tylophora tenerrima Wall. ex Wight

Figs. A-G: A. Twig. B. & C. Flowers. D. Flower dissected showing sepals and petals. E. Gynostegium. F. Pollinia. G. Gynoeceum.

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